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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

WOZNIAK, JAMES S

ART UNIT	PAPER NUMBER
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2655

DATE MAILED: 12/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/941,301

Applicant(s)

BAKIS ET AL.

Examiner

James S. Wozniak

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) 20 and 44 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 21-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. **Claims 1-19 and 21-43**, drawn to a text to speech synthesis method, classified in class 704, subclass 260.
 - II. **Claims 20 and 44**, drawn to a method of accessing a cache memory, classified in class 711, subclass 118.
2. Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the cache memory in invention I could be accessed using well known cache read/write methods that would not require the specific cache management of invention II to function properly. The subcombination has separate utility such as managing entities in a plurality of memory cache types including document or image.

3. Since these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Brian Buchheit on 9/15/2004 a provisional election was made without traverse to prosecute invention I, claims 1-19 and 21-43.

Affirmation of this election must be made by applicant in replying to this Office action.

5. **Claims 20 and 44** are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. **Claims 1-19 and 21-43** are rejected under 35 U.S.C. 102(e) as being anticipated by

Carter et al (*U.S. Patent: 6,600,814*).

With respect to **Claims 1 and 25**, Carter discloses:

Receiving a text input (*Col. 6, Lines 22-27*);

Comparing said received text input to at least one entry in a text-to-speech cache memory, wherein said entry in said text-to-speech cache memory specifies a corresponding spoken output (*comparing input text to a cache containing text that has previously been converted to speech, Col. 6, Lines 27-51*); and

If said text input matches one of said entries in said text-to-speech cache memory, providing said spoken output specified by said matching entry (*speech output retrieved from a cache, Col. 6, Lines 43-65*).

A machine-readable storage medium containing a computer program for performing the above method (*Col. 7, Line 65- Col. 8, Line 6*).

With respect to **Claims 2 and 26**, Carter recites:

The text-to-speech cache entries include said spoken output (*cache used for storing converted speech signals, Col. 5, Lines 50-63*).

With respect to **Claims 3 and 27**, Carter discloses:

Text-to-speech cache is shared across multiple text-to-speech processes (*integrated fax and email text-to-speech conversion utilizing a cache, Col. 7, Lines 57-64*).

With respect to **Claims 4 and 28**, Carter discloses:

Logging each said match of said text input with a text-to-speech cache entry (*recency of use of a cache entry, Col. 4, Lines 24-39*).

With respect to **Claims 5 and 29**, Carter recites:

Determining a spoken output corresponding to said text input; and storing an entry in said text-to-speech cache memory corresponding to said text input, wherein said entry specifies said determined spoken output (*Col. 6, Lines 52-59, and Fig. 3, Elements 66 and 67*).

With respect to **Claims 6 and 30**, Carter discloses:

Removing one of said entries in said text-to-speech cache memory (*discard determination, Col. 4, Lines 24-39*).

With respect to **Claims 7 and 31**, Carter recites:

Each said entry in said text-to-speech cache memory has a score, said method further comprising: periodically updating each said score (*recency, which would inherently be updated when a cache entry is accessed, Col. 4, Lines 24-39*).

With respect to **Claims 8 and 32**, Carter discloses:

Removing one of said entries in said text-to-speech cache memory having a lowest score (*discard determination based upon a lowest recency, Col. 4, Lines 24-39*).

With respect to **Claims 9 and 33**, Carter recites:

Received text input includes corresponding attributes and said entries in said text-to-speech cache memory include attributes (*length, Col. 6, Lines 30-59, and Col. 4, Lines 24-39*).

With respect to **Claims 10 and 34**, Carter discloses:

Comparing said attributes of said received text input with attributes of said entries in said text-to-speech cache memory (*comparing text input length to existing cache entries to determine if a new or existing entry should be deleted upon reaching full cache capacity, Col. 4, Lines 24-39*).

With respect to **Claim 11**, Carter recites:

Receiving a text input (*receiving an email text, Col. 6, Lines 22-24, and Fig. 3, Element 52*);

Processing said text input to determine a form specifying a spoken output for said received text (*parsing email text into segments for comparison with previously converted and segmented speech entries in a cache, Col. 6, Lines 24-59*);

Comparing said determined form of said text input with said entries in said text-to-speech cache memory (*comparing a text segment to previously converted and segmented speech entries in a cache, Col. 6, Lines 43-65*);

If said text input matches one of said entries in said text-to-speech cache memory, providing said cached speech output specified by said matching entry (*speech output retrieved from a cache, Col. 6, Lines 43-65*).

Claims 12-18 contain subject similar to Claims 2-8 respectively, and thus, are rejected for the same reasons.

With respect to **Claims 19 and 43**, Carter discloses:

Storing a plurality of entries in a text-to-speech cache memory, wherein each one of said entries comprises a processed form specifying a spoken output (*cache used for storing converted and segmented speech signals, Col. 5, Lines 50-63, and Col. 6, Lines 43-65*);

Assigning a score to each one of said plurality of entries (*recency, Col. 4, Lines 24-39*).

Receiving a text input (*receiving an email text, Col. 6, Lines 22-24, and Fig. 3, Element 52*);

Processing said text input to determine a form specifying a spoken output for said received text (*parsing email text into segments for comparison with previously converted and segmented speech entries in a cache, Col. 6, Lines 24-59*);

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Comparing said determined form of said text input with said entries in said text-to-speech cache memory (*comparing a text segment to previously converted and segmented speech entries in a cache, Col. 6, Lines 43-65*);

Logging when one of said plurality of entries in said text-to-speech cache memory is matched to said received text input (*recency of use of a cache entry, Col. 4, Lines 24-39*); and

Periodically updating said score for each one of said plurality of entries of said text-to-speech cache memory (*recency, which would inherently be updated when a cache entry is accessed, Col. 4, Lines 24-39*).

A machine-readable storage medium containing a computer program for performing the above method (*Col. 7, Line 65- Col. 8, Line 6*).

With respect to **Claim 21**, Carter recites:

A text-to-speech system comprising a text-to-speech engine for receiving text and producing a spoken output representative of said received text (*Fig. 2, Element, 38*), and a text-to-speech cache memory for storing selected entries corresponding to received text inputs (*Fig. 2, Element 40*), wherein said entries specify spoken outputs corresponding to said selected received text inputs (*speech output corresponding to an input text, which is retrieved from a cache, Col. 6, Lines 43-65*).

With respect to **Claim 22**, Carter discloses:

Text-to-speech entries are programmed (*storing converted speech in a cache for computer access, Col. 5, Lines 50-63, and Col. 7, Line 65- Col. 8, Line 6*).

Claims 23 and 24 contain subject matter similar to Claims 2 and 3 respectively, and thus, are rejected for the same reasons.

With respect to **Claim 35**, Carter discloses:

A machine-readable storage (*Col. 7, Line 65- Col. 8, Line 6*), having stored thereon a computer program having a plurality of code sections executable by a machine for causing the machine to perform the steps of:

Storing a plurality of entries in a text-to-speech cache memory, wherein each one of said entries comprises a processed form specifying a spoken output (*cache used for storing converted speech signals, Col. 5, Lines 50-63, and Col. 6, Lines 43-65*);

Receiving a text input (*receiving an email text, Col. 6, Lines 22-24, and Fig. 3, Element 52*);

Processing said text input to determine a form specifying a spoken output for said received text (*parsing email text into segments for comparison with previously converted and segmented speech entries in a cache, Col. 6, Lines 24-59*);

Comparing said determined form of said text input with said entries in said text-to-speech cache memory (*comparing a text segment to previously converted and segmented speech entries in a cache, Col. 6, Lines 43-65*);

If said text input matches one of said entries in said text-to-speech cache memory, providing said cached speech output specified by said matching entry (*speech output retrieved from a cache, Col. 6, Lines 43-65*).

Claims 36-42 contain subject similar to Claims 2-8 respectively, and thus, are rejected for the same reasons.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Coker et al (*U.S. Patent: 3,704,345*)- teaches a text-to-speech conversion system featuring a redundancy analyzer that maintains a list of previously synthesized words.
- Richard et al (*U.S. Patent: 5,924,068*)- discloses a text-to-speech converter that identifies words that have been previously converted and performs a conversion if a dictionary match does not occur.
- Sarukkai et al (*U.S. Patent: 5,819,220*)- teaches the use of a cache that assigns a document weighting value according to access recency.
- Van Kommer (*U.S. Patent: 6,678,659*)- teaches a text-to-speech conversion device that utilizes a cache memory to store previously synthesized audio signals.


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Wozniak whose telephone number is (703) 305-8669 and email is James.Wozniak@uspto.gov. The examiner can normally be reached on Mondays-Fridays, 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached at (703) 305-4827. The fax/phone number for the Technology Center 2600 where this application is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the technology center receptionist whose telephone number is (703) 306-0377.

James S. Wozniak
12/14/2004



DAVID L. OMETZ
PRIMARY EXAMINER